Nova Scotia

ANNUAL REPORT

for the fiscal year
ending March 31, 1986

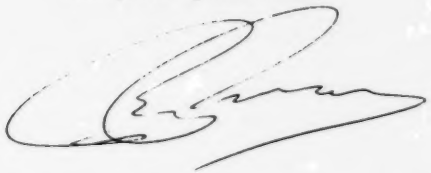
Department of Agriculture and Marketing

His Honour,
The Honourable Alan R. Abraham, C.D.
Lieutenant-Governor of Nova Scotia

May It Please Your Honour:

I have the honour to submit the Annual Report of the Department of Agriculture and Marketing for the fiscal year ending March 31, 1986.

Respectfully submitted,



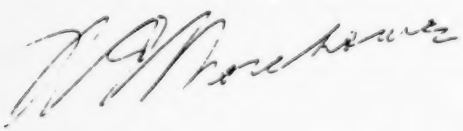
Roger Bacon
Minister

The Honourable Roger Bacon
Minister of Agriculture
and Marketing
Province of Nova Scotia
Halifax, Nova Scotia

Dear Sir:

I have the honour of presenting the Annual Report of the Department of Agriculture and Marketing for the fiscal year ending March 31, 1986.

Respectfully submitted,



Deputy Minister

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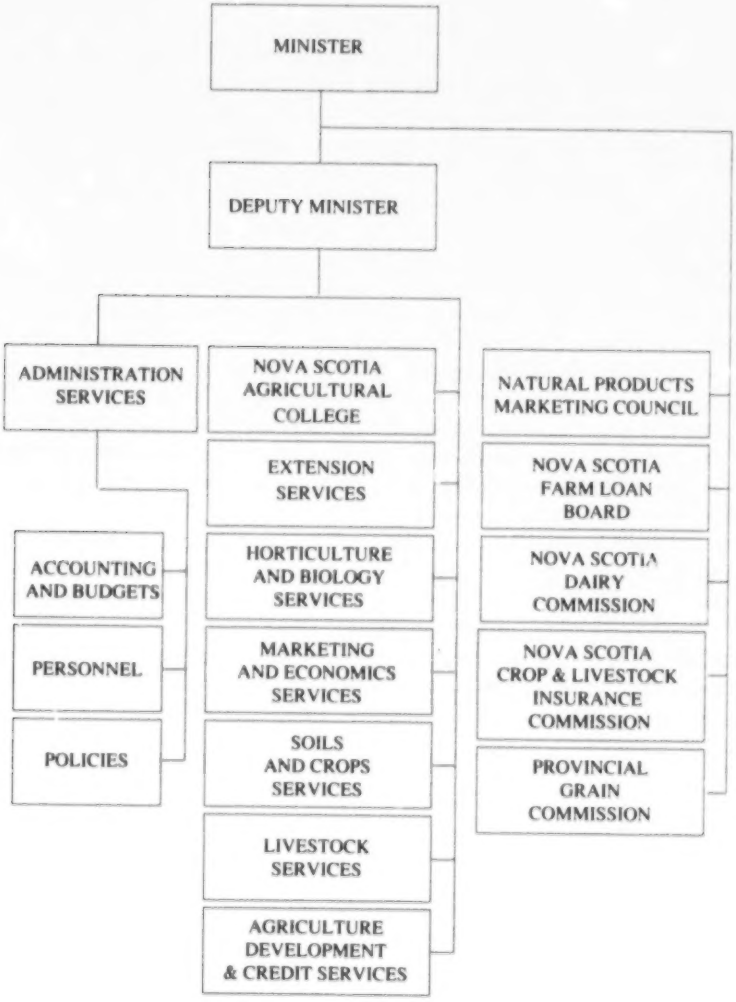
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AGRICULTURE DEVELOPMENT & CREDIT SERVICES
NATURAL PRODUCTS MARKETING COUNCIL
NOVA SCOTIA FARM LOAN BOARD
NOVA SCOTIA DAIRY COMMISSION
NOVA SCOTIA CROP & LIVESTOCK INSURANCE COMMISSION
PROVINCIAL GRAIN COMMISSION

NOVA SCOTIA AGRICULTURAL COLLEGE

OVERVIEW

A highlight of the 1985-86 academic year was the announcement by the Honourable Roger Bacon of approval for construction of the new Animal Science Building at a cost of $6.752 million. The sod turning for the building took place on October 9, 1985, in connection with the Autumn Assembly. The sod was turned by Mr. Bacon using a team of horses and plow kindly provided for the occasion by Mr. Sterling Whidden. The construction contract was awarded to Erskine Building Ltd. and the building is scheduled for completion by December, 1986. The 70,000 square foot building (two floors) will provide offices, classrooms and laboratories for teaching and research and an auditorium-type classroom designed to accommodate industry meetings. The facility includes a nutrition complex with complete chemical analysis, physiology (including a surgery room) and a modern computerized genetics laboratory. The building also includes an animal products and processing section. On completion of the new Animal Science Building, the Boulden Building will be renovated to provide a small laboratory animal care centre.

Research activity continues to strengthen and grow with funds obtained through research grants and contracts. It was particularly gratifying to realize that our staff were especially successful in the 1986 Natural Sciences and Engineering Research Council (N.S.E.R.C.) competitions. Eleven of the twelve research proposals submitted were approved. The total support of all research activities at the Nova Scotia Agricultural College is approximately $1 million.

REGISTRATION 1985-1986

Course	Enrollment
B.Sc. (Agr.)	
First Year	119
Second Year	78
Third Year	52
Fourth Year	49
Total	298
Engineering	
First Year	6
Second Year	10
Third Year	3
Total	19
Technicians	
First Year	77
Second Year	66
Total	143
Technology	
First Year	29
Second Year	30
Total	59
Special Students*	22
Total Full-Time Students	541

*Students not in a regular program leading to a degree or diploma.

COURSES OFFERED

B.Sc. (Agr.) Degree

A complete four-year course leading to a degree in Agricultural Sciences is offered with a choice of the following options:

- Plant Science
- Animal Science
- Agricultural Economics
- Plant Protection
- Agricultural Chemistry — Soils
- Agricultural Mechanization

Students can take other options without interruption by transferring to the third year of the B.Sc. (Agr.) program at Macdonald College of McGill University, the University of Guelph, the University of Maine or the Faculty of Agriculture at another university.

Engineering students who successfully complete the three years of the Agricultural Engineering degree course can proceed to Macdonald College of McGill University, the University of Guelph or can apply to the Technical University of Nova Scotia or to another engineering faculty to complete their program of study.

Students who wish to take the three-year Pre-Veterinary Program to meet admission requirements of the Atlantic College of Veterinary Medicine at the University of Prince Edward Island must, after completing the first year, enter the Animal Science option and take a specific selection of subjects. The Pre-Vet program also serves as the first three years of the B.Sc. (Agr.) program, Animal Science option. For other options, it generally takes one more year to complete the B.Sc. (Agr.) program.

Technician
The following two-year programs of study are offered:

- Agricultural Business
- Agricultural Mechanization
- Animal Science
- Farm Equipment
- Plant Science

Technology
The following two-year programs of study are offered:

- Biology Laboratory Technology
- Chemistry Laboratory Technology
- Landscape Horticulture Technology

The following two-year programs are offered only to students who have successfully completed one year of a specified Technician Course or equivalent:

- Agricultural Engineering Technology
- Farming Technology

Students in the Farming Technology Course spend eleven months

over two years (including summers) of their course work on farms. Seven of those months consist of structured training under a farmer/instructor.

Agricultural Technology is a one-year program, tailored to meet the needs of the student. Only Technician graduates are eligible to apply for this course.

VOCATIONAL AND CONTINUING EDUCATION PROGRAMS
April 1, 1985–March 31, 1986

Vocational courses have been designed to assist men and women enter or progress in farm or farm-related careers. Forty-six courses were held with 601 persons enrolled, totalling 10,618 student training days.

The Canada Employment and Immigration Commission sponsored 300 persons by paying their tuition and, on courses over ten days' duration, a training allowance. Details on enrollment are given in the following table:

	Number of Students			Percentage of Total Students		
Province	**85-86**	**84-85**	**83-84**	**85-86**	**84-85**	**83-84**
Nova Scotia	470	709	427	78.2	78.3	63.6
New Brunswick	68	82	86	11.3	9.1	12.8
Prince Edward Island	20	36	27	3.3	4.0	4.0
Newfoundland	19	18	24	3.1	2.0	3.6
Other Residents	24	60	107	3.9	6.6	16.0
Total Students Enrolled	601	905	671			

RESEARCH PROJECTS

A total of 96 research projects were active throughout the year. Research funds came from the following sources:

Source	Funds ($'000)
N.S. Department of Agriculture & Marketing	301
Agriculture Canada	53
N.S.E.R.C.	220
Industry Contracts and Grants	64
Canada-Nova Scotia Agri-Food Development Agreement	239
TOTAL	877

COLLEGE FARM

Crops

During the 1985-86 year, two events took place that will, no doubt, have a long-term effect on the cropping program on the farm. First, the College Farm was enrolled on a computerized Land Evaluation and Planning (LEAP) project with seven other farmers in Nova Scotia. This project, administered by the Soils and Crops Branch, provides for the soil mapping of the farm with soil typing, soil analysis and recording of the nutrient and herbicide applications, crop yields and crop rotation program for each of the 43 fields on the farm. The second event was the acquisition of additional land for the College on Farnham Road near the College. Approximately 62 acres of upland and dyke were obtained by the Nova Scotia Farm Loan Board for the College Farm.

The following indicates the cropping program for 1985 and the rotation plan for 1986:

Crop	Planned 1986 (Acres)	Actual 1985 (Acres)
Research Plots	12	5
Corn Silage	79	67
Legume Forage	74	39
Cultivated Pasture	57	35
Improved Pasture	59	37
Annual Ryegrass	25	22
Direct Seed Forage	39	57
Grass Forage	35	96
Barley	20	52
Oats	25	0
Winter Wheat	20	7
Soybeans	7	0
TOTAL ACRES	452	417

Livestock

Changes in livestock numbers are reflected in the year end inventories in the following table:

Species	Number March 31, 1986	Born	Donated/ Purchased	Died	Sold	Number April 1, 1985
Beef Cattle	156	77	0	10	58	147
Dairy Cattle	108	60	0	5	49	102
Sheep	178	168	0	38	102	150
Swine	548	1,099	4	195	741	381
Foxes	75	66	10	19	21	39
Mink	53	0	53	0	0	0

Dairy Cattle

The Breed Class Average (B.C.A.) rolling herd averages as of March, 1986, were 165 M-178F for the Ayrshire herd and 150 M-156 F for the Holsteins. Milk production increased to 695,673 pounds for the year for a sale value of $108,388.71.

Beef Cattle

Seventy-seven calves were born in 1985 with seven dying at, or shortly after, birth. Due to the importation of the Lacombe Shorthorns, 32 cow-calf pairs were pastured at the Cape John Community pasture. A summary of the adjusted weaning weight of the calves by dam breed follows:

Dam Breed	Number Weaned	Adjusted Weaning Weight (lb.)
Hereford	15	477
Shorthorn (NSAC)	20	497
Lacombe (controls)	6	441
Lacombe (selects)	19	469
Cross-bred	5	498

The Lacombe cows and first calf heifers were bred to Lacombe bulls, with all others bred to the Simmental bull.

Sheep

The sheep trial comparing the productivity of the Traditional and Intensive ewe flocks continued in 1985 with the Traditional flock lambing in March and the Intensive flock lambing in May and again in December. Only 50 percent of the Intensive ewes lambed in December for some unknown

reason. The age and condition of the ewes may have been a factor in the reduced fertility. Fifty-six of the original 120 ewes that started in the project in 1980 remain in the flock.

Swine

The swine unit maintained an average herd size of 40 sows and eight gilts during the year. A total of 1,099 pigs were born alive, for an average of 9.9 per sow. An average of 8.7 pigs were weaned per sow. Hog marketings were 741 for the year, with 38 percent grading with a 105 index or better.

Twenty-five percent graded 102-103, 18 percent indexed 90-100 and 19 percent were sows, boars and gilts. The co-operative research agreement with the Nappan Experimental Farm resulted in 348 of the market hogs being fed at Nappan.

Poultry

Three broiler flocks, totalling 7,500 birds, were grown during 1985-1986. Studies involving 2,300 Leghorn layers continued from the previous year.

Fur Unit

A mink shed and a second fox pelter shed were added to the Fur Unit during the year. Fox numbers were increased and mink were added to the Fur Unit with the donation of 53 breeding animals to the Unit by provincial breeders.

LIVESTOCK SERVICES BRANCH

OVERVIEW

The Livestock Services Branch provides services to the total livestock industry in four general areas: (1) provides expertise in feeding, breeding and livestock management; (2) provides rapid and accurate diagnosis of animal diseases for practising veterinarians and farmers; (3) provides for the regulation, production, inspection, distribution and sale of milk; and (4) provides for the inspection of red meat abattoirs as of July 1, 1985.

The beef industry saw 1985 slaughter cattle prices increase slightly over those of the previous year. The Beef Cow-Calf Support Program increased the production of beef cattle and helped provide some economic stability to the industry.

For the sheep industry, 1985 was a year of strong prices and good demand for lambs at the various markets. The check-off for wool in 1985 was .06¢ per pound, .04¢ for the operation of the Sheep Producers Association of Nova Scotia and .02¢ for the operation of the Wool Board.

The swine industry, in spite of low prices, was able to maintain the number of producers and programs mainly because of the Pork Stabilization Program. A total of 238 producers are enrolled in this program, representing more than 90% of the total production. This province leads the rest of Canada in the quality of hogs marketed.

The dairy cattle sector represents the largest single segment of the livestock industry. There were 188 producers who participated in the Dairy Herd Analysis System (D.H.A.S.). Owner-Sampler Program. The Nova Scotia Dairy Commission reports 615 producers as of January, 1985. During the year, 29 producers left the industry and eight new producers commenced shipping fluid milk, for a net of 594 producers as of December 31, 1985.

Farm sales of fluid milk producers, industrial producers and cream shippers in terms of milk amounted to 168,227,955 litres (382,193,645.8 pounds). Deliveries under the Market Share Quota Program for the year ending July 31, 1985, totalled 2,189,977 kilograms (4,828,023.3 pounds) of butterfat.

The poultry industry segments — Egg, Chicken, Turkey and Pullet — are all under a supply management system. The egg commodity group has been under a National Supply System for 15 years. Total cash farm income from the poultry industry is $56,979,785.

Veterinary staff and laboratory facilities support all branches in the Department of Agriculture and Marketing, as well as provide diagnostic services to the Department of Lands and Forests. Laboratory submissions for all species in 1985 were 8,124 specimens. During 1985, the Livestock Health Services Program assisted 45 veterinarians in 21 clinics, working under 23 Livestock Health Services Boards. Other programs to assist livestock owners are the Herd Health Program for swine and the Cattle Herd Health Assistance Policy. The Veterinary sector provides expertise to the large animal, poultry and fur industries.

The Fur sector continued to make a large contribution to the agricultural community. The mink and chinchilla sector showed little fluctuation in production, while the fox sector continued to grow. There are 169 licensed ranchers of mink keeping 68,000 breeder females, 260 licensed fox ranchers and five licensed chinchilla ranchers.

BEEF

Production

The following table outlines the total cattle population as of January 1, 1986, with previous estimates for comparison purposes:

Nova Scotia Cattle ('000)

	January 1986	January 1985	January 1984	January 1983
Bulls	1.7	1.7	1.7	1.7
Milk Cows	35.4	36.3	35.9	36.0
Beef Cows	26.6	26.3	26.0	26.0
Milk Heifers	15.0	15.2	15.0	15.0
Beef Heifers—Replacement	7.1	7.1	7.0	7.0
Beef Heifers—Slaughter	3.7	3.6	3.7	3.7
Steers Over One Year	10.5	10.2	10.2	10.2
Calves Under One Year	36.0	36.6	33.5	36.0
TOTAL	136.0	137.0	133.0	135.6

Prices

Slaughter cattle prices increased slightly in 1985. A1, A2 steers averaged $75.58/cwt at the Truro Sale, compared to $72.90/cwt in 1984. During the same period, D1,D2 cows sold at $51.00/cwt, compared to $47.90 in 1984.

In 1985, two feeder cattle sales were held in Truro. The overall

average price for both sales on 2,226 cattle was 74.58¢/lb. Comparative prices for 1980-1984 are also given below:

Average Price — Truro Feeder Sale

1985	1984	1983	1982	1981	1980
$74.58	$76.35	$72.05	$67.10	$65.38	$80.90

Choice and good steer calves averaged 82.4¢ per pound, with the quality being extremely good at both sales. The sales returned a total of $976,255 for the 1,308,945 pounds of beef sold.

Improved Sire Policy

Assistance was paid on the purchase of bulls during the year as follows; with statistics from previous years given for comparison purposes:

	1985	1984	1983	1982	1981
Purebred No. Herd Sires	29	38	33	22	28
Commercial Herd Sires	191	167	121	123	131
Total Assistance Paid	$ 79,500	$ 74,600	$ 54,450	$ 43,300	$ 37,175
Value of Bulls	$300,227	$277,920	$192,200	$177,865	$246,005

All bulls must be performance tested either at home or at the Maritime Beef Cattle Test Station and meet minimum standards for rate of gain and yearling weight. This has helped educate producers in the use of performance records and their application to practical breeding programs.

Beef Cow-Calf Support Program

The purpose of this program is to increase the production of beef cattle in Nova Scotia and provide some economic stability to the beef cow-calf sector of the industry. Information on applications is given below:

	1985	1984
Number of Applications	519	508
Total Animals Bonused	15,905	15,408
Average Per Application	31	30
Total Monies Paid Out	$636,200	$616,320
Average Per Application	1,226	1,213

Performance Testing

We continue to participate in the Federal-Provincial Record of Performance (R.O.P.) Beef Program, with 195 herds enrolled on the Home Test Program. This program is designed to assist breeders in selecting replacement heifers and herd sires on the basis of rate of gain. It is a very valuable aid in a selection program.

During the fall of 1985, 195 herds were enrolled in the Home Test Program, making an increase of 20 herds from the previous year.

In addition, the Maritime Beef Cattle Test Station at Nappan continues to operate on a year-round basis. Since 1966, 2,470 bulls have been tested there.

During 1985 203 bulls were tested at Nappan. About 60 percent of all bulls tested were from Nova Scotia.

The Test Station also offers excellent facilities for the Annual Bull Sale held in April of each year.

Community Pastures

Livestock numbers remained fairly constant on Community Pastures during 1985, with some decrease in sheep numbers on the Cape John Pasture.

The Cape John Pasture had 562 head of cattle and 232 sheep and lambs entered. The cattle did very well on pasture, with an Average Daily Gain of 1.98 pounds. No disease or management problems were

encountered. In general, patrons were well satisfied with livestock performance on the Cape John Pasture in 1985.

The Cape Mabou Pasture had 502 head of cattle and 547 sheep and lambs pastured. Cattle performance was excellent, with an Average Daily Gain of 1.90 pounds reported.

The Minudie Pasture continued to operate under lease agreement, and 331 head of cattle were pastured for six patrons. Cattle performance was good at this pasture during 1985.

The five Co-operative Pastures located at L'Ardoise, Cheticamp, Glendale, Manchester and Digby were operated under the management of the local co-operatives.

SHEEP

Production

The sheep industry in 1985 was highlighted by strong prices, and good demand for lambs was experienced at all markets. Northumberland Marketing Co-op was quite successful marketing lambs in 1985, with a projection of 5,000 lambs marketed for the year ending March 31, 1986. Sheep and lamb numbers in Nova Scotia, as recorded by Statistics Canada on July 1, 1985, were 43,000.

The Livestock Services Branch continued to work closely with the R.O.P. Ram Test Station at Nappan in 1985. Twenty-three rams were officially tested for Average Daily Gain and 100-Day Adjusted Weight. Nova Scotia breeders consigned 18 head.

The Home Test Record of Performance Annual Report showed 67 flocks, with 6,909 lambs born and 6,111 lambs weaned. Nova Scotia had the third highest number of lambs in Canada on test in 1985.

The Home Test Program provides a mechanism for measuring the performance of animals within the flock.

Prices

Lamb and mutton prices at the Maritime Cattle Market were strong in 1985. The volume that was offered through the market was approximately 6,311 lambs and 2,783 ewes. The average price for sheep was $49.92

per head, for lambs 80 pounds and over, 87¢ per pound, and for 60-80 pound lambs, 86¢ per pound. Prices were taken from the Market Report.

The annual Breeding Stock Sale sponsored by the Purebred Sheep Breeders Association of Nova Scotia grossed $10,478.60. Animals sold were ewe lambs, yearlings, two-year-olds, mature and selected R.O.P. Tested Rams.

	1985		1984		1983	
	No.	Average	No.	Average	No.	Average
Ewe Lambs	13	$110.75	22	$ 99.40	59	$ 64.48
Yearlings	15	148.50	13	157.40	35	87.49
Two-Year-Olds	8	87.00	6	158.00	19	58.93
Rams	24	200.00	24	232.00	38	190.00
Mature Ewes	29	97.00				

One feeder lamb and cull ewe sale was held in Truro on October 5th, with about 275 head sold for a gross of $12,878.49.

Assistance Policies

The Livestock Services Branch supervised three sheep policies in 1985: they were the Improved Sire Policy, Sheep Production Policy and Sheep Pasture Improvement Policy.

Improved Sire Policy (January 1, 1985–December 31, 1985)

Total Number of Rams Bonused — 31

Suffolk — 20	North Country Cheviot — 5
Dorcet — 3	Clun Forest — 3

Twelve rams bonused at $20.00 (making Super, Class I and Class II from the Maritime Ram Test Station).

Total Assistance — $3,370.00

Sheep Production Policy (January 1, 1985–December 31, 1985)

No. of Yearlings Bonused	1,188
No. of Producers	50
Total Assistance	$38,480.00

Sheep Pasture Improvement Policy
(January 1, 1985–December 31, 1985)

Approx. No. of Acres Fenced	426
Feet of Wire Used	60,810
Land Cleared (acres)	25
No. of Producers	30
Total Assistance	$17,780.64

GOATS

The Nova Scotia Goat Producers Association had a busy year organizing a number of local shows, Maritime and Atlantic. There was also a classification day held, an A.I. day and a cheese-making day. A number of provincial 4-H club members had goats as their project. Four producers were officially tested under the Dairy Herd Analysis Service Program. The Association and the other Maritime associations are working on the feasibility of having a person hired to do the DHAS testing.

SWINE

Production

A total of 248,093 hogs were marketed through federally inspected plants in 1985. This was an increase of 6,000 over 1984 and is the highest number of hogs ever marketed in Nova Scotia in a 12-month period. The average weekly price for 100 index hogs over the year was $69.85/cwt. The gross value of these hogs was in the area of $31 million.

Pork Quality

The following is a comparison of how Nova Scotia indexed in relation to the Canadian average this year and in the four previous years:

		1985	1984	1983	1982	1981
Index 102 +	Canada	74.3	74.2	79.8	68.8	67.4
	Nova Scotia	80.7	83.3	81.1	78.8	74.9
Index 105 +	Canada	43.8	43.7	39.4	38.0	35.0
	Nova Scotia	52.4	52.5	51.8	47.7	49.0
Index 108 +	Canada	14.5	14.2	12.3	11.4	9.4
	Nova Scotia	17.3	17.1	17.7	14.9	16.0

Nova Scotia producers continue to lead other provinces in Canada in the quality of hogs marketed.

Record of Performance Testing

There continued to be strong support for both Home and Station Testing of swine in 1985. In 1985, 1,442 boars and 2,930 gilts were tested on the Home Testing Program, representing an increase in boars and a decrease in gilts, compared to 1984.

A total of 385 boars were tested at the Nappan Test Station in 1985, with an average backfat of 12.3 mm and an average of 149 days to reach 90 kilograms (198.5 pounds).

Swine Herd Health Program

There are 100 pork producers enrolled in the Swine Herd Health Program utilizing the services of nine local veterinarians. Visiting producer herds on a regular basis has resulted in improving the overall management and health situation in our swine herds. This program becomes of even greater importance during periods of low pork prices, when top performance is necessary.

Improved Sire for Swine

The quality of hogs marketed in Nova Scotia is in a large measure due to the continued use of the best performance-tested boars available. Assistance was paid on a total of 321 boars. Landrace accounted for 160, Yorkshire 115, Hampshire 15 and Duroc 31.

Nova Scotia Pork Price Stabilization Program

A total of 238 pork producers are enrolled in this program, representing more than 90 percent of our total production. This program has been very valuable in maintaining our industry through the continued low price periods of recent years. Without this program, many of our producers would have found it very difficult to survive due to the economic forces presently in existence.

Swine Breeding Stock Sales

There continued to be a lower demand for swine breeding stock in 1985 due to depressed pork prices. The value of animals sold through the

Nova Scotia Swine Breeding Stock Sales Society in 1985 amounted to $54,000, compared to $126,000 in 1983.

Producer Organizations

We continue to work closely with both the Pork Producers' Association of Nova Scotia and the Pork Producers' Marketing Board of Nova Scotia. This close liaison is very important in developing programs and policies. Supply management and study committees are examples of two areas in which we have participated.

POULTRY

Production

The Nova Scotia poultry industry is broken down into five economic production divisions. They are: (1) Egg Production; (2) Pullet Production; (3) Broilers — (a) Cornish Chicken, (b) Light, (c) Regular, and (d) Roasting; (4) Turkeys — (a) Broilers, (b) Hens; (5) Hatchery.

In Nova Scotia we have four registered hatcheries. The egg segment has 46 registered producers, who produced 15.7 million dozen eggs. We have 22 commercial pullet producers, with a total quota of 834,666 pullets.

Nova Scotia's registered chicken producers grew approximately 15.5 million kilograms (34.1 million pounds) (eviscerated weight) of chicken. Eleven registered turkey producers grew 475,008 turkeys, or 1.77 million kilograms (3,894 million pounds) (eviscerated weight).

Blood Testing Program

The Branch continued an extensive blood testing and vaccination program for exhibition birds. In 1985 there were more than 2,500 birds in the 4-H Poultry Project. The unbanded exhibition birds will continue to be tested for Pullorum.

There were only two outbreaks of Infectious Laryngotracheitis (I.L.T.) in 1985. One was in a small flock in the Rawdon area, but the second was in a large commercial layer flock in which 24,000 birds had to be destroyed. Vaccination of layers for Mycoplasma gallisepticum (MG) does not appear to be a workable solution to rid a population of MG.

DAIRY

Production

Milk production for the year from our fluid farms was 76,467,252 pounds, a decrease of 2.1 percent from the previous year.

Dairy cattle numbers on our fluid producer farms in 1985 were 30,831, a decrease of 1.5 percent from 1984. These numbers reflect an average herd size of 52 cows. The number of licensed milk producers recorded on January 1, 1985, was 615. Twenty-nine producers left the industry and eight entered the dairy business, leaving a net loss of 21 producers. As of December 31, 1985, 594 producers were licensed.

Dairy Cattle Sales

Prices for fresh cows and heifers were up slightly. Milk production per cow was down slightly from that of the previous year.

	Number of Dairy Cows		
	January 1, 1986	**July 1, 1985**	**January 1, 1985**
Cows for Milk	29,500	29,000	30,000
Replacement Heifers	11,500	11,500	11,500
TOTAL	41,000	40,500	41,500

Dairy Herd Analysis Service

As of December 31, 1984, there were 188 herds in the Owner-Sampler of D.H.A.S. Program, the same number as in 1982. These 188 herds represent 9,662 cows.

As of December 31, 1985, the 178 herds that had completed at least 12 months in the program had a rolling herd average of 6,184 kilograms (13,633 pounds) of milk with a 3.25 percent butterfat test. Production per cow decreased by 73 kg (161 pounds) compared to a year earlier. The top herd average in 1985 was 8,428 kg (18,580 pounds), just slightly lower than in 1984 and the second highest in Nova Scotia D.H.A.S. history.

The main thrust of the Dairy section is involvement and supervision of the D.H.A.S. Program and Dairy Cattle Extension Field Services. It is also involved with breed associations' work, the Federation of Agricul-

ture, the Nova Scotia milk producers, the Canadian Milk Recording Board, exhibitions, 4-H clubs, the Holstein Sire Selection Committee and the Nova Scotia Animal Breeders Cooperative.

VETERINARY

The Veterinary section is involved in the following areas:

1. Collaborates extensively with the Food Production and Inspection Branch, Agriculture Canada, in disease control and Canada Domestic Inspection;

2. Is responsible for the Livestock Health Services Program, which operates under the Livestock Health Services Act and is carried out by local Livestock Health Services Boards. This program provides for the delivery of veterinary service to livestock owners;

3. Is responsible for the Swine Herd Health Program, which is available across the province through seven veterinary practices;

4. Is responsible for the provincial Red Meat Inspection Program;

5. Operates the Veterinary Pathology Laboratory, which processes and reports on specimens from all animal species for producers and veterinarians; and

6. Works closely and often collaborates with other sections of the Livestock Services Branch, other branches of the Department, including the Nova Scotia Agricultural College and other departments of government.

LIVESTOCK HEALTH SERVICES PROGRAM

This program is carried out under the Livestock Health Services Act by approximately 45 veterinarians in 21 clinics working under 23 Livestock Health Services Boards. The number of veterinarians in large animal practice varies slightly throughout the year, but the numbers have gradually increased during the past several years. This program is responsible for the delivery of veterinary service to livestock producers in Nova Scotia. The number of services provided, miles driven and payments to Livestock Health Services Boards are shown for the last three years:

Year	No. Clinic Calls*	No. Farm Calls*	Miles Driven*	Payment to Boards**
1985	1,751	27,633	650,077	$1,190,000
1984	1,860	29,617	670,442	1,075,700
1983	1,993	28,601	656,297	1,230,250

* Data from monthly statements submitted by Veterinary Practices to Boards for payment.

** Payments to veterinary practices are less than funds paid to Boards.

Swine Herd Health Programs

The Swine Herd Health Program was made more comprehensive in 1980. The producer is entitled to one herd health visit per month. The Department of Agriculture pays the veterinarian's call fee and one-third of his hourly rate. There are approximately 100 herds enrolled in this program.

VETERINARY PATHOLOGY LABORATORY

The number of laboratory submissions has declined gradually in recent years. However, submissions to Hematology and Chemistry increased dramatically over those of the previous year.

Bovine chemistry submissions are primarily related to herd profiling, and this has become an important part of evaluating herd nutritional status.

FUR FARMING

The Fur sector continued to make a large contribution to the agricultural community in Nova Scotia. The mink and chinchilla sector showed little fluctuation in production, while the Fox sector continued its expansion in both producer and pelt numbers.

Mink Ranching

Mink ranching continues to be the largest section of fur farming in Nova Scotia. There are presently 160 licensed producers within the province keeping 68,000 breeder females. Digby County continues to be the stronghold of the mink industry, keeping 75 percent of the total females in the province, while Kings County has the fewest, with .03 percent of the total females kept.

Total pelt production in Nova Scotia is approximately 220,000, which is 16 percent of Canada's mink production. Dark mink accounts for 83 percent of Nova Scotia's mink production.

The main auctions held in Canada were at Hudson's Bay in Toronto, in December, 1985, and February, 1986, with some pelts going to small auction houses in New York.

The overall pelt average to date at Canada Mink Breeder-sponsored sales is $41.48. This price is $9.00 per pelt below that of 1984.

The farm gross in the 1985-1986 pelting season amounted to approximately $9,125,000. This represents an infusion of new money to Nova Scotia's economy, and since 50 percent of the sales were to foreign countries, it also represents a net benefit of $4.5 million to the Canadian economy. The gross farm income does not include breeder animal sales.

Fox Ranching

Fox ranching continues to expand in Nova Scotia, with 260 licensed ranchers keeping breeder females, a significant increase over last year. The average number of females kept per ranch is 23, with the largest keeping in excess of 200 females. Approximately 8,500 pelts were produced, making Nova Scotia the third largest producer in Canada. This generates approximately $1.1 million in gross farm receipts.

The Silver fox continues to be the predominant fox raised in Nova Scotia. The other types raised are Pearl Platinum and Platinum. Also, there are a few ranchers importing breeding stock of new varieties from outside Canada, hoping to diversify their operations.

In the fall of 1985, a problem with the fox coat was noticed in the southwestern region of the province. The hairs on the animal were becoming brittle and breaking off. This was of great concern because it was occurring during the priming phase of furring and could have a detrimental effect on the pelts. Initial investigation of the ranches affected appeared to implicate one brand of feed as a common denominator. However, when the situation became more widespread in other areas of the province, other feeds were involved, complicating the situation. A similar problem was occurring in the province of New Brunswick.

Since being established in 1984, the Nova Scotia Fur Institute has been very active in both research and expansion. During 1985, feed

trials, behaviour work and artificial insemination were carried out by staff of the Animal Science Department of the Nova Scotia Agricultural College in co-operation with the Fur Section of the Livestock Branch.

The Fur Unit housed animals from several ranches during the treatment trial for the fur disorder. Thirty of these animals were kept to evaluate their breeding performance in 1986. The Fur Unit also increased its own breeding herd of silver foxes from 26 breeder females to 40. Also, a second fox pelter shed was erected.

The mink phase of the Fur Unit began with the completion of a pelter/breeder shed. Through producer contributions the Unit will be starting with 48 black breeder females. This is a good foundation to start with. Industry support of the Fur Institute was shown when the Canadian Mink Breeder's Association made a $5,000.00 contribution and the Canada Fox Breeders contributed $7,500.00 toward research into the fur disorder. The Canadian Mink Breeder's monies will be used for acquiring equipment needed for a feed kitchen. With continued industry support, the Fur Institute can play an important role in assisting the Fur sector.

Chinchilla Ranching

This sector of the fur industry is a small one, with only five licensed producers. However, it remains stable with consistent pelt returns.

MARKETING AND ECONOMICS

OVERVIEW

The Marketing and Economics Branch continued its effort to assist in the effective marketing of Nova Scotia agricultural products. This was done in the areas of product promotions, strengthening of co-operative marketing organizations and close economic analysis of markets for the various segments of the agricultural industry. In addition to the marketing programs, services such as price and supply, regulations and tariff information were maintained and made available to the industry.

A major thrust was made at the foodservice market, which is a significant consumer of agricultural products. A foodservice marketing specialist was assigned solely to this market. This new liaison with the hotels, restaurants and institutions (H.R.I.) uncovered many marketing opportunities that heretofore had gone largely unnoticed by the Nova Scotia producers. In this two-way street, the HRI trade has become aware of a contact in their search for agricultural products. This has proven particularly so in their search for local food exotica to fill gourmet menus.

The Branch continued to explore and encourage new ideas in food processing, which will expand our market demand.

MARKETING BOARDS

Nine commodity marketing boards operated in the province under the general supervision of the Natural Products Marketing Council. They were:

1. Nova Scotia Wool Marketing Board (est. 1947)
2. Pork Producers Marketing Board of Nova Scotia (est. 1952)
3. Nova Scotia Chicken Marketing Board (est. 1966)
4. Nova Scotia Egg & Pullet Producers Marketing Board (est. 1966)
5. Nova Scotia Turkey Marketing Board (est. 1972)
6. Nova Scotia Flue-Cured Tobacco Growers Marketing Board (est. 1973)
7. Nova Scotia Processing Pea Marketing Board (est. 1980)
8. Nova Scotia Winter Grain Marketing Board (est. 1981)
9. Nova Scotia Potato Marketing Board (est. 1982)

LIVESTOCK MARKETING

Information material and/or advisory assistance on red meat, poultry, dairy products and livestock marketing is provided on a routine basis. Requests are received from Department personnel, industry, trade associations, interdepartmental groups and committees on a provincial and interprovincial basis.

Such widely diverse topics as tanning, goat's milk, sheep and lamb, yogurt, pheasant and feeder cattle markets are also addressed.

Surveys were done on consumer preferences, snack foods, edible oil consumption and dessert markets.

This branch administered the Hog Transportation Policy and the Hog Stabilization Policy.

The United Kingdom Co-operative Markets relative to meat processing were visited in the company of Nova Scotia meat processors.

In 1985, a computer data base was completed detailing hog and beef price information.

FRUIT AND VEGETABLE MARKETING

The Marketing and Economics Branch continues to maintain a close liaison with the fruit and vegetable industry.

The Branch assisted in the renewal of the Newfoundland strawberry market and the launching of locally produced white endive on the Nova Scotia market. Asparagus was examined in concert with the Tobacco Marketing Board as an alternative crop for the industry. Storage of chip potatoes for that industry was also researched.

Roadside marketers were assisted in the design of new market facilities and the modification of existing ones. A "Produce Merchandising Seminar for Direct Marketers" was held, and the Branch assisted in organizing a similar type seminar put on by DEVCO in Sydney.

In co-operation with Agriculture Canada, a vegetable marketing mission to Europe was organized in which three Nova Scotia producers participated. Here, selling methods, market research programs, promotion and infrastructure were examined.

Assistance was given to the Strawberry Growers Association of Nova Scotia in drafting terms of reference for a Price Waterhouse study entitled "Market Research and Feasibility Analysis for Processing N.S. Strawberries."

Our participation in Phase II of the Nova Scotia Fruit Growers Association industry strategy, "Profile of the Future", continued in 1985. Display materials were assembled for use in the "McRed" promotion at the International Food Exposition in London.

MARKET INFORMATION

As in former years, market information was provided by the bi-weekly *Market Report* (1,425 subscribers), *Market Update, Market Facts* and the *Fruit and Vegetable Supply Forecast* (200 subscribers). The telephone recorder service, Market Information Line, was revived in 1985 and 655 calls were received. An AFDA-assisted computer database was established in late 1985 that will supply daily and weekly information on fresh produce, livestock and grains. This can be assessed by growers with micro-computers through a telephone data link. *Focus on Foodservice*, a new monthly publication directed at the foodservice industry, is mailed to about 500 subscribers.

The *Agricultural Directory* was updated in 1985.

The Branch continued to coordinate a weekly radio livestock price information program released through the Nova Scotia Department of Government Services channels.

GENERAL ECONOMIC ANALYSIS

Our staff monitored and examined various agricultural economic developments and related them to the Nova Scotia scene. Such items as the Royal Commission on the Economic Union and Development Prospects for Canada, the U.S. Farm Bill, the water movement of grains, relative levels of federal assistance to agriculture in different provinces and regions, Department of Finance White Paper on Farm Income, Bill C-25, European beef imports and freight rate increases are but a few of the areas reported on.

For the hog industry, a presentation entitled "The Competitive Position of Nova Scotia Hog Industry with Respect to Feed Costs" was made to the Nova Scotia Pork Conference.

A background paper entitled "A Crisis in Maritime Agriculture" examined the feed grain policy.

As well, the Branch participated in the following:

1. Federal-Provincial Committee on Agricultural Trade Policy
2. AFDA Evaluation Committee
3. Federal-Provincial Committee on Agricultural Statistics
4. Impact study of the Agri-Food Industry on the Economy of Nova Scotia
5. Greenhouse Vegetable Study
6. Tripartite Stabilization Program Administration
7. Nova Scotia Hog Industry Task Force
8. Economic Impact Study of Tobacco Production in Nova Scotia
9. U.S. Countervail Action on Hogs and Pork.

MARKET DEVELOPMENT

In the area of market development, the major emphasis was placed on promotions and advertising.

Considerable concentration was placed on blueberry, strawberry, vegetable, dairy, apple, turkey and potato programs. With each of these, developmental time and dollars were spent on brochures, posters, price cards, mall and exhibition programs, media advertising, point-of-sale material and in-store demonstrations. These commodity groups were fairly aggressive in 1985 and used the services of this branch in planning their promotions.

As well as the provincial market, the Nova Scotia story was carried to the national and international (Boston) scenes.

On the home front, U-Pick and roadside markets were assisted. The ever-increasing farmers' markets, now numbering 13, were assigned a full-time person from May to October to assist in start-up and development.

In 1985, a test kitchen was established out of which many recipes using agricultural products have been developed and published.

The School Milk Program continues to maintain its popularity, with 94 percent of Nova Scotia schools participating. To this, the Department contributed $1,768,000 in 1985.

Gourmet items such as Chanterelle mushrooms, lingonberries and fiddleheads continue to be encouraged by this branch. The constraint continues to be stimulating harvesters in these marketing opportunities.

Development of the Nova Scotia fresh wild blueberry market continues to be encouraged; 260 tons were marketed in this way in 1985, up from 170 tons in 1984.

CO-OPERATIVE ASSOCIATIONS

In 1985, co-operatives showed a unity that impressed many people. Through their two conferences, the special meeting with the ministers responsible for Co-operatives, the Honourable Roger S. Bacon, and Credit Unions, the Honourable Laird Stirling, and also the production and distribution of 25 copies of the video on Co-operation in Nova Scotia have made an impression on many.

Sales increases of 20 percent year after year, market share of more than 60 percent and return on investment of more than 30 percent indicate that when a co-operative is well run the results are very positive.

Sales by co-ops are now about $450 million and insurable assets about $200 million, and much of this is financed by credit unions in the province — a dramatic change over the past few years.

With a new wave of worker co-operatives, we expect their growth and development will be as dramatic as have been housing co-ops. There are now more than 25 worker co-ops, with a possibility of another 10-15 this coming year. Much of this growth will depend on the ability to provide the necessary support structures for these organizations.

In 1985, 17 co-operatives were incorporated and six were in the liquidation process.

Approximately 500 inquiries were received by the inspector during the year regarding how co-operatives function. Such questions as legal aspects, management, member relations, history and present status were handled by this branch.

Meetings and seminars were an integral part of the inspector's responsibility. More than 100 of these were attended.

AGRICULTURAL MANPOWER

The Department was represented on the Federal-Provincial Agricultural Manpower Development Committee. The Maritime Farm Certificate Program is providing skilled labour for the industry and has proven extremely successful.

Harvest labour shortages were experienced in areas of fruit production. Generally, wages were the constraint.

Farm labour pools have given excellent service to the industry. Their number of placements continues to grow.

Seasonal workers' housing that has been built and improved over the past two years was filled to capacity. This has contributed to a secure work force.

The Provincial Employment Program provided 356 jobs in the private sector and 63 in the public sector in 1985.

AUDIO-VISUAL

Audio-visual equipment use continues to increase as an extension tool. Such equipment as cameras, projectors, screens, Ringmasters, tape recorders, VCRs and sound systems were loaned 678 times.

The very popular video show "It's In Our Nature", depicting Nova Scotia agriculture, has been updated and is now available under the title "Meeting the Challenge".

HORTICULTURE AND BIOLOGY BRANCH

OVERVIEW

This branch of the Department provides leadership and an advisory service to the horticultural industry on scientific techniques of commercial food and ornamental crop production. The work of the Branch members in commodity groups is often advisory in nature but tends to be developmental as well, particularly when working with the research committees of the various horticultural producers' associations. Horticulture specialists in the Branch have also been active on the various sub-committees of the Canada/Nova Scotia Agri-Food Development Agreement, including the Berry Crops, Vegetable and Tree Fruits Sub-Committees. The Branch has also contributed considerable time to the AFDA On-Farm Resource Development, Technology Development and Technology Acceleration Committees.

The horticultural industry strengthened and expanded again in 1985. Total farm value for horticultural crops in Nova Scotia was in excess of $60 million.

APICULTURE

Honey production was below normal in 1985, with the average yield per hive being 14.5 percent below the 10-year average. Total production was estimated at 259 tons, a 10 percent increase over that of 1984.

The dollar value of the 1985 crop is estimated at $590,000. If income from hive rentals is included, total farm gate value is $770,000. This figure does not reflect the true value of the beekeeping industry as it does not include the dollar value of the gain by crops pollinated by honey bees.

The discovery of *Acarapis woodi* in Texas in July, 1984, and the subsequent spread of this honey bee tracheal mite throughout the United States in 1985 caused great concern in the North American beekeeping industry.

Packaged bees and queens were ordered from Georgia and queens were ordered from Texas and California, states in which the mite had not been found or where eradication programs had been carried out by the United States Department of Agriculture. F.W. Jones and Son, Bedford, Quebec, obtained an additional supply of packages from New Zealand.

In all, 540 packages were brought in from New Zealand and 800 from Georgia. A total of 350 Carniolan queens and 250 Buckfast queens,

plus 2,000 extra queens, were imported in 1985.

Present trends within the industry are to winter a larger percentage of bees and rely less on importation of packaged bees. There is a growing potential for a local queen rearing and nucleus hive production industry.

A total of 543 hives were inspected as well as 113 supers, representing 62 apiary inspections.

APPLE MAGGOT CONTROL

Over the past few years, infestations of apple maggot have levelled off at just below 20 percent, with the exception of 1983. According to surveys carried out by the Board, 81 percent of the orchards are now free of apple maggot. The apple maggot survey results for the past seven years are given in the following table:

	1985	1984	1983	1982	1981	1980	1979
Number of Registered Growers	216	230	236	253	268	272	326
Number of Blocks	695	710	697	755	756	755	858
Number of Infested Blocks	113	124	182	118	124	144	284
Percentage of Blocks Infested	19.1	17.5	26.1	15.6	16.4	19.1	33.1
Percentage of Contacts Infested	37.6	37.4	45.0	29.2	31.0	39.0	49.0

As in the past, the Apple Maggot Control Board and the Food Production and Inspection Branch of Agriculture Canada co-operated in carrying out the fall orchard inspections. A total of 16 inspectors participated in the five-week survey, during which time 1,254 inspections were completed (695 of these were commercial orchards).

BERRY CROPS

The 1985 season for berry crops, excluding lowbush blueberries, resulted in lower returns to some producers. In 1985 these crops grossed Nova Scotia growers $5,565,828, a decrease of $171,894 from 1984 returns.

Strawberries

The 1985 Nova Scotia strawberry industry was valued at $4,391,058, a six percent decrease from the 1984 value.

The 1985 strawberry crop equalled the largest crop Nova Scotia growers have produced and the largest volume sold. It is believed that fruit sold would exceed five million quarts, harvested from 1,100 acres. Fruit quality was excellent.

Advertising and promotion programs by growers, the Nova Scotia Strawberry Growers' Association, the Nova Scotia Farm Fresh Marketing Association, and provincial and federal Departments of Agriculture were fully developed and utilized during the harvest season.

The Nova Scotia certified strawberry nursery program has experienced phenomenal growth during the past 10-year period. Sales increased from 2.8 million to 15.2 million plants during this time. In 1984, more than 85 percent of the nursery sales were to other provinces in Canada and to many states in the United States.

Blueberries

Nova Scotia's 1985 wild blueberry crop totalled 18.9 million pounds. Although lower than the exceptional production of 1983, this is the second highest crop on record. Production average for the past four years has been 16.1 million pounds per year. It is expected that the province's annual production will remain in the 15-20 million pound range over the next several years. There is an estimated 26,000 acres of lowbush blueberry land in production, with an estimated 1,000 growers many of whom are part-time farmers.

The market situation in 1985 was one of depressed prices. Record blueberry crops in most North American production areas for the past three years, combined with higher prices in previous years, resulted in a build-up of carry-over stocks. Inventory levels of processed berries were at record levels going into the 1984 crop season and diminished only slightly through the year.

Processors did not quote a final field price at harvest time but growers eventually were paid 25¢ per pound. The value of the lowbush blueberry industry at the farm gate declined to $4,737,690. Total value to the provincial economy was about $14,000,000.

The Department's Lowbush Blueberry Land Clearing Policy assisted on 550 acres in 1985-86, compared to 1,107 acres in 1984-85.

The Nova Scotia Blueberry Institute is in its second year of operation and acts as a coordinating body for investigative research, providing assistance to the blueberry industry through demonstrations and educational programs and providing field sites for plot research and demonstrations. A block of land (about 17 acres) in the Debert Industrial Park

has been deeded to the Nova Scotia Department of Agriculture and Marketing for use in research and demonstration projects. The Institute is currently administering an extensive land levelling project.

GREENHOUSE INDUSTRY

There are approximately 41 acres of greenhouses and more than 80 commercial greenhouse producers in Nova Scotia. Production is spread through most of the province, with the largest producers situated in Annapolis, Kings, Hants and Cumberland counties. Total sales for 1984 were $12,692,560.

Ornamental plant production is the largest segment of the industry and includes cut flowers, flowering pot plants, foliage plants, bedding plants and vegetable transplants. Thirty-two acres of greenhouses are used for these crops, and sales totalled $11,420,650 in 1984.

The greenhouse vegetable industry is approximately nine acres in size and nearly equally divided between tomato and cucumber production. Marketing takes place between March and October, and the 18 producers achieved sales of $1,271,932 in 1984. Hydroponic production of lettuce is a new crop for two growers with limited year-round lettuce production.

MAPLE SYRUP

In Nova Scotia, in 1985, 72 maple operations made and sold a total of 14,915 gallons from 191,950 taps. This is a 13 percent decrease in production from 1984. The average operation made 207 gallons from 2,666 taps.

The number of taps in Nova Scotia increased 25,000 over 1984. Markets have expanded so producers need more syrup, which they are getting by adding more taps. As well, two or three new operations start up each year. Thus, in terms of the number of taps, the maple industry has been and continues to be in an expansion stage.

ORNAMENTALS

The 1985 landscape sod and nursery industry was valued at $15.2 million. More than 1,000 people are employed in this industry, and the

following is a listing of the individual components and the number of establishments in it:

Sod Growing — 14 growers, 2,500 acres in production, 2,356,000 yd^2 harvested; Value: $2,500,000
Landscape Contracting — 45 establishments
Landscape Maintenance — 13 establishments
Ornamental Nurseries — 20 establishments; 85 acres
Garden Centres — 28 establishments
Tree Pruners — 8 establishments
Miscellaneous Sales Stations — 50 establishments

The Department of Agriculture and Marketing also provides home garden extension assistance. In addition to handling more than 4,500 telephone information requests and 1,100 written requests, an association was maintained that included 35 garden clubs and six horticultural societies in the province, having a total membership of 1,300 people. The Nova Scotia Garden Guide is also produced by this division. A total of 130 tapes were distributed to 14 radio stations in the province during the year.

TREE FRUITS

The 1985 growing season for tree fruit production was not a good one. However, fruit trees overwintered well with only minor injury to the stone fruit trees. Fair weather conditions during pollination resulted in reduced fruit set in some areas. Cool and wet weather during June and early July adversely affected the apple crop. Fruit size was down, and poor fruit colour delayed harvest and reduced the pack-out of fruit. Apple scab was up in 1985 as a result of the wet weather.

The overall farm gate value of the 1984 tree fruit crops was estimated at $10,226,578, compared to 9,330,500 for 1983.

Apples

The November estimate placed the 1985 apple crop at 2,600,000 bushels, compared to 1984's crop of 2,900,000 bushels.

The reduction in the 1985 yield was the result of wet weather during bloom, cool temperatures following bloom and biennial bearing. All cultivars were down from 1984 production, with Cortlands showing the greatest decline in production.

The marketing and returns remain the major concern for fruit growers. Although production was down 10 percent compared to that of1984, prices did not improve. The Nova Scotia Fruit Growers' Association study of the tree fruit industry, "Profile of the Future", was conducted in 1985 to give direction to the industry and to find a means of correcting the marketing situation in Nova Scotia.

The Nova Scotia Fruit Growers' Association continued its McRed brand McIntosh program for export sale to Great Britain. However, export sales declined to 97,392 bushels in 1984-85 from 116,251 bushels in 1983-84. Export sales of the 1985-86 crop are lower than those of the previous year because of poor fruit quality in the 1985 growing season.

Pear and Stone Fruit

The 1985 pear crop was estimated to be 80,000 bushels, which would be 10,000 bushels lower than the 1984 crop.

The value of the pear crop was $540,000, with an average return of $6.00 per bushel. The plum crop was estimated to be the same as that of 1984 at 13,000 bushels, valued at $196,000. Peach growers had a good crop while the cherry crop was fair.

The number of new fruit trees planted in 1985 decreased to 52,671 from 61,509 in 1984, representing 427 acres of new orchards.

VEGETABLES

In the province, 11,447 acres of vegetable crops are grown by 313 vegetable producers, generating an estimated $11.1 million at the farm gate (not including greenhouse vegetable crops). A total of 145 million pounds of marketable vegetable crops are produced annually. Of the vegetable crops area, 75 percent is in Kings County, 20 percent is in the counties of Cumberland, Annapolis, Colchester, Cape Breton and Pictou, and five percent is in the counties of Hants, Lunenburg, Halifax, Yarmouth and Digby.

The year 1985 was a difficult one for many vegetable growers. Yields of processing potatoes, peas and beans were reduced by excessive rainfall, which resulted in poor emergence, drowning out and induced root rot. Warm season crops such as sweet corn, tomatoes and cucumbers were also delayed by cold weather and root rot.

Fresh market prices were low for the storage vegetable crops but higher for the balance of the cool and warm season crops.

BULK BIN POLICY

The Bulk Bin Policy is administered through the Horticulture and Biology Branch. Fruit and vegetable growers were eligible to apply under the Policy. The assistance under the Policy was $10.00 per bin up to a maximum of $1,000.00; minimum number of bins eligible is 25. To be eligible, growers had to operate a minimum of five acres of tree fruits or vegetables. The bins were inspected and coded according to the codes used under previous policies.

A total of 74 applications were approved, of which 67 claims were processed (47 fruit, 20 vegetable), and there were two claims from processors.

It has been normal procedure (as requested by the Nova Scotia Fruit Growers' Association) to allocate any unused money to the processors for bins. This year there was $3,120 remaining at the end of December, which was designated for use by two processors.

EXTENSION BRANCH

OVERVIEW

The role of the Branch is to provide agricultural education information and service to the commercial and part-time farmer and to the rural community in general. The Branch reaches a broad number of people through programs such as workshops, short courses, agricultural awareness, 4-H, food education and Women's Institutes. New features in 1985 included Farm Management Challenges '85, a home study course in family financial management, and training for exhibition committees on display arrangement and presentation.

AGRICULTURAL REPRESENTATIVES & SPECIAL PROJECT OFFICERS

The primary objective of the Agricultural Representatives and Special Project Officers Division is to provide a co-operatively planned extension education program and advisory service to Nova Scotia farmers, farm organizations and others involved in the agricultural industry in Nova Scotia. Agricultural Representatives provide a "first point contact" to rural clientele on matters related to livestock, crops, soils, farm management, farm loans and rural development.

In 1985, 14 county offices, with a staff complement of 37 people, were maintained to serve rural Nova Scotians. Through farm and office calls, short courses, meetings, radio broadcasts and news releases, staff deliver extension education programs, production, marketing and financial information required by the clientele to improve their economic viability and standard of living. It is the responsibility of the Agricultural Representatives to communicate and provide up-to-date information on all matters relating to agricultural production and marketing. This involves technical as well as policy information.

FARM MANAGEMENT

The primary ojective of the Farm Management Division is to assist Nova Scotia farmers, farm leaders and Nova Scotia Department of Agriculture and Marketing staff in developing their farm business management knowledge and skills. Farm Management is concerned with the management of all resources available to the farm manager and with decision making. Decision-making implies choosing among alternatives. The major emphasis of our program and services is to meet this objective

of providing information, guidance and analysis to clients to enable them to enhance their business management skills.

Farmer Counselling

Individual farmer contact continues to be a major part of our Farm Management Extension Program. This contact may be either in the form of farm calls by our staff or through farmers seeking assistance by calling our offices. During 1985 we had a total of 951 farm calls and calls to the office by farmers. A breakdown of the purpose of these calls is as follows:

Record Systems and Analysis	263
Pre-Loan Counselling	128
Business Agreements & Tax Management	103
Financial Management & Analysis	146
General Farm Management	311

During 1985 staff prepared 160 formal budgets for farmers. These budgets were primarily in the form of cash flow projections.

An indication of the respect enjoyed by our staff is the number of clients referred to us by others in the Department of Agriculture and Marketing, by bankers, by lawyers and by accountants. In 1985 we had a total of 162 referrals for assistance.

Education Programs

One of the key roles of the Farm Management Division is to enhance the business management knowledge and skills of clients. While part of this objective can be met by individual contact, educational programs are another method used by our staff. During 1985, staff participated in 70 short courses and workshop sessions throughout Nova Scotia. Attendance at these sessions totalled 1,845 people.

Management Information Programs

The need for up-to-date, reliable management information related to costs, returns and production co-efficients has been increasing over the past number of years. We have attempted to fill part of this need of our clients.

In 1985 we prepared and distributed a number of farm business

summaries, production cost studies and farm management fact sheets relating to the farm business management area.

4-H AND RURAL YOUTH

"Follow the 4-H Trail" was the 1985 theme. It exemplified the development of youth through 4-H involvement. The theme was featured throughout the year at all 4-H events and shows.

Nova Scotia 4-H Council

The Nova Scotia 4-H Council continues to play an active role in designing programs and advising changes for the 4-H program. In 1985, the Nova Scotia 4-H Council approved participation in an International 4-H Project in Montserrat, British West Indies, and raised $18,800 towards the new multi-purpose building at Camp Rankin. The Nova Scotia 4-H Council was guided by the capable leadership of President Mary Magee of Kings County.

Nova Scotia 4-H Weekend

More than 375 volunteers and members attended the Nova Scotia 4-H Weekend, May 10-12, 1985, at the Nova Scotia Agricultural College in Truro. Competitions were held in public speaking, demonstrations, square dancing, woodsman, posters, decals and host and hostess categories. On Saturday, May 11, more than 1,000 people attended "4-H Night in Nova Scotia" at the Cobequid Educational Centre, Truro. The program highlighted the weekend's winners as well as National 4-H Award recipients.

The 1985 4-H Host and Hostess were selected and they are Gary Patterson, Kings County and Karen Kittilsen, Hants County.

Competitors in public speaking and demonstrations went on to the Atlantic Competition and took top honours.

Nova Scotia 4-H Show

The Nova Scotia 4-H Show was held September 27-29, 1985, at the Nova Scotia Provincial Exhibition Grounds in Truro. More than 12,000 people attended the three-day event, which was organized by a committee of volunteer adult leaders. The 4-H Show featured the top 4-H projects and competitors from each county and was the top show to

date in quantity and quality.

The 4-H Market Steer and Lamb Show 'N' Sale had enthusiastic participation. Seventeen market steers were sold at an average of $1.28 per pound, 15 market lambs were sold at an average of $2.48 per pound and 10 market cockerel trios were sold at an average of $37.58 per trio.

Other 4-H Activities

Camp Rankin opened a new multi-purpose building, which will add to the program. The building cost roughly $68,000, and 4-H clubs throughout the province raised $18,800. The labour was covered by a Canada Works Program.

Five 4-H camps for intermediate and junior 4-H members, were held at Camp Rankin in the summer of 1985, with 240 members participating.

The Nova Scotia 4-H Leader's Conference was held at Keddy's Motor Inn, Truro, November 1-2, 1985. Forty-two adult volunteers participated.

4-H Statistics

In 1985 there were 1,179 boys and 1,800 girls participating in the program, for a total of 2,979 members. The average age of the membership is 12.9 years and the tenure of the members roughly 2.4 years. Members enrolled in 4,462 projects and completed 3,666, for a completion rate of 82 percent.

In 1985 there were 134 multi-project community 4-H clubs, with an average of 22 members each. These clubs were led by 863 adult volunteer leaders and 134 junior leaders in 34 different projects. The program roughly has a ratio of one adult volunteer for every three members.

Project Breakdown:

Beef Calf	306	Horticulture	252
Dairy Calf	349	Food	383
Poultry	109	Sewing	281
Horse	328	Crafts	892
Sheep	105	Woodworking	389
Rabbit	225	Outdoorsman	222
Other Livestock	191	Photography	95
		Others	335

HOME ECONOMICS

The objectives of the Home Economics Division are:

1. To increase agricultural awareness (to develop a positive attitude and a better understanding of what we produce, cost of production, and the importance of the industry through the development and implementation of extension education, education programs aimed at consumers, professionals as multipliers, and children;

2. To facilitate group and personal development in Women's Institutes and agricultural organizations through needs identification, leadership training and volunteer recognition (commitment of time, money);

3. To provide specialist and technical information to the farm community and professionals and in areas of management and organizational skills; and

4. To increase professional visibility and further develop a rapport and positive attitude with members of the agricultural community to more clearly define our role with the field of agriculture.

Food Education and Promotion

The Food Education Program has remained a visible high priority part of the Home Economics Division's program. The home economist sees her role as one to educate the consumer about the Nova Scotia agricultural industry and its products. In addition to the proper preparation of foods, information is provided on the industry's importance to the overall economy.

The use of the media is one of the main avenues the home

economist uses to get this message across. Regular newspaper columns, press releases, guest articles, radio tapes, open-line shows and interviews are the many avenues used.

The Food Education Program has changed over the years and has been incorporated effectively into other parts of Home Economics as well. The Women's Institutes, 4-H and farm women participate in food projects initiated by the Home Economics Division. For example, many 4-H clubs and Women's Institute branches are active in Nutrition Month, Meat Month and World Food Day programs. Both 4-H and Women's Institutes have been sponsoring groups in the Food Extravaganza Program. Farm women have participated in programs to promote to the general public the products they produce. This is a real step forward, with producers taking their product story from production right through to consumption.

Women's Institutes of Nova Scotia

Plans are underway to develop a program entitled "Families Feeding Families", designed for the district to look at and learn about some of the agricultural issues facing farmers today.

Communications and motivation leadership kits have been developed for use by Women's Institutes at the branch and district levels.

Over the years, a commendable working relationship has been established with Women's Institutes. They have unlimited energy when they are motivated to take on a task. Some of the examples of cooperative programs where Women's Institutes have done so much for us include the food extravaganza shows, Nutrition Month, Meat Month and World Food Day, as examples. The Farm Women's Conference is another example and will be dealt with as a separate item.

4-H Homemaking

Looking at the 4-H statistics, there has not been a significant change in the number of clients served. 4-H is a fairly labor-intensive program, but the commitment to provide evaluation of the member's work at Achievement Day remains strong and is reflected in the improved quality of work displayed.

1985 Farm Women's Conference

The sixth Farm Women's Conference was held in November with an attendance close to 100 delegates. Delegates were welcomed into the meeting room complete with displays of interest. The session got underway with get-acquainted activities followed by the theme address "You're a Woman". To develop the friendly atmosphere, participants were encouraged to meet a friend and take her to lunch.

The afternoon session featured a panel called "Challenges of Being a Farm Woman". These women shared their ideas. This panel was one of the highlights of the conference since many women can identify closely with these farm women.

A session called "Easing Farm Stress" provided women with relaxation techniques to be better able to deal with stressors. Dr. Ellen McLean, World President of the Associated Country Women of the World, shared her travels and visits with other farm women around the world. Day two included a session on marketing challenges, followed by a session entitled "Evaluating your Insurance Needs".

The conference provides a social element as well as a place where farm women come together and learn and share with one another. It is a pleasure to work with this group of ladies and to see all the positive things that have developed from the conferences.

Summary

Budget restrictions have led to alterations in the program; however, staff have learned to priorize and make choices. Changes have been made in how the clientele is being served, allowing for an increase in the number being served.

EXTENSION AGRICULTURAL ENGINEERING

The work of the Extension Agricultural Engineering Division involves providing technical support services for various government programs to assist farmers and the agricultural industry in the construction of capital works. These works include all types of farm structures for livestock housing and crop storage and handling, land development works and land protection works. The Division is also involved with providing consultation and technical service related to farm mechanization, crop processing and storage and energy conservation and utilization.

The work of the Division is reported under five program areas: Land Development, Farm Mechanization, Crop Processing, Land Protection and Farm Buildings. The highlights for the past year were as follows:

Land Development

This program covers the provision of technical and design services with respect to drainage, land clearing, land forming, farm pond construction, dykeland roads and all forms of irrigation.

Much of the effort of the Division is directed toward administrative input and support to operating the Land Improvement Policy through processing of applications, inspection of works and processing claims for assistance.

A statistical summary of the Land Improvement Program is as follows:

No. of Applications Approved	926
No. of Applications Rejected	28
Total Value of Applications Approved	$6,250,000.00
Grant Value of Applications Approved	$4,687,500.00
Total Value of Claims Processed	$5,309,868.30
Grant Value of Claims Processed	$3,982,401.20

Land Improvement statistics are as follows:

Category	Units of Work Completed
Land Clearing	2,745 acres
Windrow Removal	168,103 feet
Apple Tree Removal	4,684 trees
Underdrainage	3,240,518 feet
Surface Ditching	617,155 feet
Ditch Spoil Levelling	253,307 feet
Land Forming	580 acres
Roads on Dykelands	23,373 feet
Land Levelling	760 acres
Land Ripping	19 acres
Lowbush Blueberry Land Clearing	566 acres
Firebreak Construction	45,195 feet

A drainage study plot was installed in the Shubenacadie area to conduct intensive drainage spacing investigation studies on a Queens clay soil. Installation of monitoring equipment and initial data collection will begin in 1986.

Land Protection

This area includes programs related to the operation and maintenance of tidal dyke systems, and of flood control structures on the Musquodoboit River and Brierly Brook, as well as the construction of Main Outlet Drainage channels.

The land protection work is divided into five geographic regions, each with an aboiteau superintendent to oversee and coordinate the work. A summary of the work carried out is as follows:

New Aboiteaux Constructed	1
Aboiteaux Repaired	47
Dykes Profiled	42,000 feet
Dykes Topping Surveys	7,100 feet
Marshland Ditches Surveyed	189,750 feet
Upland Ditches Surveyed	63,000 feet
Rock Tonnage on Dykes	52,800 tons
Land Forming Surveys	588 acres

One large reinforced concrete structure was built at Pereaux, Kings County, at a cost of $231,000. These structures are initially expensive

but will require minimal repairs in future years.

A total of $265,000 was spent on Main Outlet Drainage. Approximately one-third of this amount was spent on developing the East Amherst-Fort Lawrence Marsh. This is the second year of development on the 1,600-acre marsh.

Crop Processing and Energy

This phase of the work involved engineering input into several areas of agriculture. The main categories were:

- Provincial Grain Centres
- On-Farm Grain-Feed Facilities
- Fruit & Vegetable Storage and Handling
- Energy Management and Conservation

Provincial Grain Centres: Three contracts were prepared, tendered and awarded during 1985, in addition to completion of the Middleton Contract awarded in 1984. The engineer was involved in the design, preparation and supervision of plans and specifications. Work was as follows:

Centre	Tender Price
Middleton	$125,950
Steam Mill	$199,961
Bayhead	$ 19,420

Fruit and Vegetable Storages: The number of new structures constructed in 1985-86 was somewhat less than anticipated. A total of 42 clients requested engineering assistance. There were 11 sets of plans for new facilities or major renovations prepared by staff.

Energy Management and Conservation. There was also considerable activity in this area. There were 40 requests for information on alternate energy sources and energy management. These requests involved information on solar collectors, windmills, heat pumps, heat recovery systems and various other energy management proposals.

Farm Structures

A very important segment of the Extension Engineering work is provision of engineering counsel and technical planning and assistance for farm

structures. Farm structures include livestock buildings, crop storages, manure storages, machinery buildings and other miscellaneous structures.

The Province has agreed to provide the technical input into the Canada/Nova Scotia Agri-Food Development Agreement. This agreement has resulted in periodic heavy workloads for the structures engineers, although the on-farm segment of the agreement ran out of funding in the fall, resulting in a somewhat reduced workload.

During the past year there were more major barn fires in the province than normal. Buildings destroyed included seven dairy barns, three beef barns, one potato storage and one apple storage. Staff engineers worked with most of the people who lost buildings in planning and designing new replacement structures.

A summary of the structure engineering work is as follows:

New Plan Sets Prepared	127
No. Plan Sets Distributed	1,685
No. Plan Sheets Distributed	6,075
No. Farm Structures Calls	627

Custom plan sets prepared by staff engineers are as follows:

	No.	Percentage
Beef	31	24.4
Dairy	23	18.1
Swine	6	4.7
Sheep	4	3.1
Fruit & Vegetables	12	9.4
Grain, Forage	6	4.2
Special Structures	24	18.8
Building Engineering	9	7.0
Manure Storage	9	7.0
Poultry	2	1.5
Miscellaneous	1	

Farm Power and Machinery

The area of farm mechanization continues to be the segment of the industry experiencing very rapid change.

For the producer to compete in today's agricultural industry, he must be able to steadily increase his unit production and provide a better quality product with little increase in cost to the consumer.

Machinery evaluations and demonstrations have proved to be an excellent method of keeping the agricultural industry informed of new developments. Some of the machinery evaluated and demonstrated included:

- Strawberry harvester
- High-density balers
- Mechanical harvesting methods for primrose
- Blueberry harvester (3 units)
- De-stumper for blueberry land
- Frost protection (air fan)
- Land levelling equipment (blueberries)
- Blueberry sorter
- De-stoner
- Forage harvesting equipment (European)

A number of field days were held, which involved co-operation with farm groups and industry. The objective was to update farmers on new equipment, ideas and techniques. These field days included:

- Blueberry Field Day
- Blueberry Harvester Field Day
- Plowing Demonstrations — Annapolis
  — Antigonish
  — Fredericton
  — Halifax
  — Truro
- Combine Adjustment

In addition, a number of short courses were set up in which the Machinery Division was involved. The courses varied from one-hour sessions to two-day sessions and included:

- Strawberry Production Equipment (Digby)

- Pesticide Application on Strawberries
- Blueberry Short Course
- Pesticide Application
- Equipment Management
- Farm Machinery Management (Pesticides)
- Equipment Operation (Cobi Foods)

Atlantic Farm Machinery Institute

The Institute has been in place since March, 1985, and has been developing and receiving proposals for mechanization research and development projects.

Sources of funding for this type of work are very hard to procure at present. Consequently, only two small projects have been undertaken to date.

The Institute continues to function with one part-time employee and a Board of Directors. If funding can be secured for one or two major projects, a full-time engineer will be retained.

SOILS AND CROPS BRANCH

OVERVIEW

The Soils and Crops Branch is responsible for crop extension activities for all cereal and forage crops grown in Nova Scotia utilized either as human or animal feeds. Tobacco, which is grown entirely as a cash crop, is also the responsibility of the Soils and Crops Branch. As well, the Branch is responsible for providing expertise in six other major areas of activity:

1. Weed expertise for all crops and the administration of the Weed Control Act;

2. Soils expertise to serve all branches of the Department of Agriculture and Marketing and other departments of government, i.e., Departments of Health, Forestry and the Environment;

3. Establishing a coordinated criteria for land use planning as affected by Agriculture and other departments of government, i.e., Development, Transportation, Municipal Affairs, Lands and Forests and Tourism;

4. Soil Survey, a section headed by staff of the federal government under funding of the Soils Resource Research Institute, is supported in Nova Scotia with housing, including laboratory facilities, one full-time professional and one full-time agricultural technician;

5. Provincial Chemistry Laboratory Services maintained at Truro serve all professional staff of the Department of Agriculture and Marketing, all farmers, market gardeners, greenhouse operators and homeowners in soil and water sample chemical analysis, as well as livestock feed sample analysis to determine the nutrient content. Plant foliar analysis service is provided to greenhouse operators and orchardists at a nominal cost. All other routine laboratory analysis services are provided free of charge to Nova Scotia residents;

6. Administering a Pesticide Residue Analysis Service located at the Kentville Agricultural Centre, which is cost-shared equally with the other three Atlantic provinces.

THE SEASON

Generally, a very wet and cool growing season caused difficulties for farmers. Below normal precipitation during the previous fall, winter and in April created good field work conditions in late April; however, cold temperatures early in April and frozen ground contributed to a slow start on the season. Heavy rains in May at many locations prevented timely seeding of spring crops. June, with rainfall three times normal at several locations, created more delays in seeding and also delayed forage harvesting operations. Fine, warm, dry weather in July finally gave relief to farmers and crops. Early August provided fine but cool weather and a chance to start harvesting early maturing winter grains. Wet weather late in the month halted harvesting. September was cool but excellent for harvesting and fall seeding with 70 percent below normal rainfall. 1985 was poor for corn because of the cool, wet weather. October provided more fine weather for late harvesting and fall field work.

Average temperature and precipitation departures from Normal in Nova Scotia during 1985 were as follows:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Temperature Departure from Normal (°C)	−3.1	+0.8	−0.5	−0.7	−0.1	−0.6	+0.9	−0.4	−0.4	0	−0.8	−2.3	−0.5
Precipitation Departuref from Normal (%)	−40	−7	−8	−29	+56	+176	−20	+38	−73	−35	−13	−37	−5

The normal period used is 1951-1980. Note that values represent averages of nine stations across Nova Scotia.

CROPS

Forage

Much of the first cut forage in 1985 was harvested during early July rather than during the preferred time of mid-June. The three-week delay in harvesting resulted in large yields of low quality forage.

It was estimated from the results of forage tested at the Provincial Laboratory that crude protein levels for both first and second cut grass hays were 10-14 percent lower than in 1983 and 1984. The situation was even more pronounced in mixed hays, with crude protein levels down 20 percent.

Forage seed sales were very good in 1985. Many farmers planned to reseed large acreages of forages, but poor planting weather left many

acres unseeded.

Forage seed sales in the region indicate a shift away from the old multi-purpose mixtures, composed mostly of common timothy, red clover and alsike, to recommended mixtures composed of certified seeds.

The Soils and Crops Branch takes information on species adaptability and utilization characteristics and designs mixtures with special considerations to species compatability, livestock needs and soil type. One mixture formulated by Branch personnel, composed of orchardgrass, Kenhy fescue and ladino clover, has proven to be a very productive pasture mix.

The recommendations made by the Branch are published and are promoted through farm tours, winter meetings and demonstration plots. The seed trade has been very receptive to the Department's recommendations and is willing to work with Branch personnel in promoting more improved species and mixtures for pasture and stored feed.

Hay

The disastrous year for haymaking in Northern England created a large demand for Maritime hay. Scotia Hay Co-op shipped more than $100,000 worth of hay into this market. This, in conjunction with an expanding market in Newfoundland, produced total sales for Scotia Hay Co-op of over $156,000.

In 1985, Scotia Hay Co-op teamed up with Co-op Atlantic, the central purchasing co-op for the Maritimes. Co-op Atlantic will use its extensive experience to locate buyers and sell hay for Scotia Hay Co-op.

With large markets opening in the U.K. and the possibility of markets being established in the Middle East and Florida, the future of exporting Nova Scotia hay looks very promising.

Corn

In 1985, 12,850 acres of corn (6,425 acres in silage and 6,425 acres in grain) were planted in the province, up 60 percent in the last two years to a level not seen since the 1970s. The renewed interest seems to be mainly in the production of "high moisture ear corn", rather than in whole plant silage or dried shelled corn.

Cool temperatures and high rainfall in May and June resulted in a poor corn crop. The near continuous rainfalls delayed planting, caused excessive leaching of nutrients and slowed the growth of emerging seedlings.

A concentrated effort to develop significantly earlier hybrids for the Maritime region is now underway by Agriculture Canada, and it is expected that high yielding, reliable, cold, tolerant hybrids will be available to Nova Scotia farmers in about ten years.

Cereal

Growing conditions during the season disrupted the steady upward trend experienced in Nova Scotia grain production during the last five years. Plantings of wheat, oats, barley, mixed grain and rye totalled 46,948 acres, producing 42,323 tons of grain. Total acres of small grains planted in Nova Scotia from 1981-1985 are given below:*

Crop	1985	1984	1983	1982	1981
Wheat	4,942	5,930	4,942	5,683	7,131
Oats	20,015	19,521	19,026	18,039	16,635
Barley	12,108	12,108	11,119	8,896	8,612
Mixed Barley	4,942	5,436	5,930	5,930	5,367
Rye	4,942	4,448	3,954	3,954	5,323
TOTALS	46,949	47,443	44,971	42,502	43,068

*Statistics Branch, Agriculture Canada

Barley production has increased substantially in recent years; however, oats still remain the most prominent cereal grown.

Leger six-row barley has become the most popular spring barley. Its good performance in regional cereal trials, as well as excellent on-farm performance, has resulted in a dramatic shift to this one variety.

Tibor hulless oats were available for field evaluation in 1985 at a limited number of sites. Eight farmers around the province cooperated in a Technology Acceleration Project to evaluate both the agronomic performance of this variety and the feeding value. The Soils and Crops Branch identified the farmers who would participate in the program and coordinated the agronomic program. The Animal Science Department at the Nova Scotia Agricultural College conducted feeding studies on the grains harvested. The inclement growing season made it difficult to properly assess the varieties' agronomic performance. Grain harvested

from these trials averaged 4.5 percent hull compared to 25-30 percent on a conventional oat. Initial feeding studies indicate the feeding value of the grain produced to be very high. Follow-up feeding studies are in progress.

Farmer interest in Intensive Cereal Management continues high for those producers who wish to improve their level of cereal crop management and thus improve on-farm self-sufficiency in feed grains.

Inputs of anti-lodging agents and fungicides improve a producer's chances of producing a successful crop. The anti-lodging agent, Cerone, was available for full commercial use in 1985 after receiving a registration for cereals in late 1984.

The availability of foliar fungicides to control disease pressure is still a limiting factor in grain production, both in yield and quality. The severe disease pressure of 1985 confirmed that adequate disease protection materials are not presently available to our farmers.

Oilseeds

Soybeans and Canola continued to interest Nova Scotia farmers in 1985. The need for non-grain rotation crops is still very evident, and the oilseeds fit in with cereal grains very well.

New varieties of soybeans are continuing to prove adaptable to our conditions. They can be used directly in ruminant animal rations and, once heat-treated, can be used in hog and poultry rations. Estimates place 1985 soybean production in Nova Scotia, between 1,730 acres and 2,471 acres.

Canola was grown commercially in 1985 for the fourth year. Members of the Nova Scotia Canola Growers Association grew 92.5 tons of Number 1 Canola on 141 acres, for an average yield of 1.4 tons per acre. This is a 0.6 ton per acre improvement over the 1984 average yield. Research and demonstration trials indicate that European varieties will outperform Western Canadian types under conditions, and the farmers involved intend to plant representatives of this type exclusively in 1986. Canola seems to have an important place in cereal rotations in the lower heat unit areas of the province.

Tobacco

Tobacco yields in Nova Scotia slipped slightly in 1985 as compared to other years due to poor growing conditions. Growers produced 1,173,869 pounds on 605 acres, for an average yield of 1.93 tons per acre in 1985. This is a reduction from the 1,594,136 pounds on 647 acres produced in 1984. Growers received $1.76/lb. in 1985 for a gross return of $2.058 million.

PEDIGREED SEED

The Nova Scotia Pedigreed Seed Production Assistance Policy was continued in 1985. Two seed growers were paid assistance totalling $1,528.62 (maximum $2,000 per grower) during 1984. This is a reduction from 1984, mainly because the largest group of seed growers failed to apply on time.

This policy is designed to make cereal seed production in Nova Scotia more profitable so more seed will be grown in Nova Scotia, thereby reducing farmers' dependence on imported seed.

NOVA SCOTIA WEED CONTROL ACT

A total of 20 municipal weed inspectors were appointed during 1985. Their work incurred expenditures totalling $94,726.22 for weed control cost-shared under Sections 7, 8, and 9 of the Weed Control Act.

SOIL AND CROP IMPROVEMENT ASSOCIATION

Activity under the name of County Soil and Crop Improvement Associations continues to expand. There are 12 county or area associations that are staging meetings, tours, demonstration crop projects, soil projects and crop competitions. Each group is headed by a Board of Directors or a Crop Improvement Committee formed under the Federation of Agriculture. Paid memberships during 1985 totalled 619.

FERTILIZER ASSISTANCE POLICY (1985)

County	No. of Applications	Average Application ($)	Total Expenditure ($)
Annapolis	149	$619.61	$ 92,321.99
Antigonish	139	899.60	125,044.97
Cape Breton	72	598.03	43,058.39
Colchester	250	769.42	192,355.97
Cumberland	194	668.74	129,736.73
Digby	28	271.90	7,613.33
Guysborough	36	323.50	11,646.30
Halifax	74	733.97	54,313.97
Hants	177	630.38	111,577.57
Hants East	106	990.13	104,954.80
Inverness	105	622.45	65,357.83
Kings	464	892.58	414,158.77
Lunenburg	152	367.22	55,817.57
Pictou	211	550.28	116,109.32
Queens	17	219.12	3,725.04
Richmond	8	208.51	1,668.12
Shelburne	4	169.12	676.49
Victoria	17	571.44	9,714.62
Yarmouth	48	516.97	24,815.01
Total	2,251	$695.09 (avg.)	$1,564,666.79
1984-85	2,387	$660.83	$1,575,398.26
1983-84	2,430	$655.17	$1,592,070.65
1982-83	2,481	$638.30	$1,583,628.30

NOVA SCOTIA WINTER GRAIN MARKETING BOARD

The Nova Scotia Winter Grain Marketing Board, a producer-run board, is responsible for marketing all grains handled by the Provincial Grain Commission. Growing conditions, combined with lower grain prices for all grains except those of milling quality, reduced the number of tons committed for sale. The number of producers using the Board's services in 1985 was 165, down from 195 in 1984.

The following is a summary of the grain handled by the Board from the 1985 crop, as of July 23, 1986.

Crop	Tons Pooled	Average Market Price To Date (Nearest $) 1985 Crop	1984 Crop	Average Net $ To Producers 1985	1984
Milling Wheat	822	224	209	197	188
Feed Wheat	1,584	158	188	138	170
Rye	1,163	132	157	*	131
Barley	1,103	143	157	122	142
Oats	875	106	160	*	123
Hulless Oats	104	173	–	159	–
Corn	1,662	153	171	*	144
Soybeans	97	268	284	*	231
Canola	92	235	–	164	–

*Pool not yet closed, net return not available.

Hulless oats were marketed by the Nova Scotia Winter Grain Marketing Board for the first time in 1985. There is both a keen interest in growing this crop as well as among grain buyers in purchasing the product. Traditional oats, however, continue to be diffficult tomarket, and lower advance payments have been set in an attempt to discourage oat production and encourage a shift to more marketable grain types.

PROVINCIAL CHEMISTRY LABORATORY

A total of 27,751 samples were received for analysis during the 1985 calendar year. While soil samples declined by 4.3 percent from 1984, tissue samples increased by 54.5 percent. Poor weather experienced during the year is a probable cause of the trend.

A 15-year summary clearly shows the trend to increased sampling by farmers.

SOIL SURVEY

Soil survey at 1:50,000 scale of Colchester County proceeded in 1985. The maps and reports were returned to Ottawa for further edit and review in preparation for publication.

LAND EVALUATION AND PLANNING SERVICE

A pilot project to test methodology of farm scale soil survey and advisory service was operated in 1985. A total of eight farms were surveyed across the province by a field crew of six. They surveyed some 3,459

acres of land on those farms. The pilot program was used to modify the procedures and methods and to obtain direct input from the farm community on how to adapt the program to the best needs of Nova Scotia farmers.

In conjunction with the pilot project and, in anticipation of offering the program on a full-scale basis in 1986, significant progress was made in 1985 toward establishing and operating on a production basis a soil physics laboratory and cartographic studio. Overall, farmers' response to the program has been excellent.

LAND USE PLANNING

Soils and Crops Branch personnel were very active in the area of land use planning and soil survey in 1985. An extensive committee structure exists to oversee these issues, and the Branch function is to represent the Nova Scotia Department of Agriculture and Marketing on these bodies. Tasks included drafting reports such as the "Agricultural Land Management Objectives" for submission to Policy Board. Other areas of activity included the Offshore Issue Group investigating land use and community effects of the proposed gas pipelines and various mapping groups looking at standardizing land information management systems.